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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/579,072	12/22/1995	ADAM S. WYSZYNSKI	49581/P006US/09604915	3750

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FULBRIGHT & JAWORSKI L.L.P
2200 ROSS AVENUE
SUITE 2800
DALLAS, TX 75201-2784

EXAMINER	
CHAN, RICHARD	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
11/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	08/579,072	WYSZYNSKI, ADAM S.	
	Examiner	Art Unit	
	Richard Chan	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,15-18 and 20-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18 and 20, 21, 23-27* is/are allowed.

6)☒ Claim(s) *13 and 15-17* is/are rejected.

7)☒ Claim(s) *22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/2/07 have been fully considered but they are not persuasive.

With respect to independent claim 13, the applicant states that the low pass filter of Eastmond is provided within a quadrature phase detector, and there does not appear to be any corresponding circuitry within Yamamoto.

However the examiner cites the teaching of implementing a IF filter 131 at the output of the mixing stage 1. Eastmond discloses wherein a conventional IF bandpass filter could be replaced by a low pass filter. (Col.3 line 10-19) The use of a low pass filter in place of a bandpass filter is known to one of ordinary skill in the art in order to maintain lower cost to the manufacture of the device, and to rid the unwanted creation of high frequency harmonic signals often associated after a mixing stage.

Applicant's arguments, see page 7-8, filed 10/27/07, with respect to independent claims 18, 26 and 27 have been fully considered and are persuasive. The rejection of claim 18 has been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 13, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US 5,361,395) in view of Kaschke (5,555,550) and in further view of Eastmond (US 4,606,075).

With respect to claim 13, Yamamoto discloses a system for processing radio frequency signals comprising: an input to the circuit for receiving an RF signal (12); a mixer having an input connected to the RF signal input (connection between items 12 and 14); a first filter having an input connected to an out put of the mixer (connection between items 14 and 15); a first amplifier having an input connected an output of the first filter (connection between 15 and 16); a second filter having one input connected to an output of the first amplifier (connection between 16 and 17); and a second amplifier having an input connected to the out of the second filter (connection between 17 and 19), and the output connected to an output of the circuit (connection between 19 and 20), however Yamamoto does not explicitly show wherein said first filter is a lowe pass filter and wherein the mixer, first and second filters and first and second amplifiers are constructed on a single integrated substrate.

The Kaschke reference however discloses putting the electrical components on a single integrated substrate circuit is very well-known in the art; and also, it is an obvious choice of design as evidenced by Kaschke (col. 3, lines 28-35).

Kaschke discloses a radiotelephone wherein the electrical components are constructed on a single integrated substrate. Hence, it would have been obvious to one of ordinary skill in the art to have the components on a single integrated substrate in order to reduce size, weight, or components.

And the Eastmond reference discloses wherein the first filter 13 (Figs.2 – 5) are a low pass filter after a mixing stage from mixer 128 of Fig.1 is processing the Q signal after mixing. The limitation that is claimed discloses a first filter have an input connected to an output of said mixer, no where do the claims mention any direct connection.

It would have been obvious to one of ordinary skill in the art to implement the specific AGC control circuitry of Eastmond and the teaching of electrical components constructed on a single integrated substrate by Kasche to filter higher frequency noise and in order to reduce size, weight, or components respectively to the RF receiver of Yamamoto.

With respect to claim 15, Yamamoto further discloses wherein said first amplifier means is a variable gain amplifier. (fig.1, item 16)

With respect to claim 16, Yamamoto further discloses the second filter means is an intermediate frequency, band-pass filter (fig. 1, item 17).

With respect to claim 17, Yamamoto further discloses the second amplifier means is an fixed gain amplifier FGA (fig. 1, item 19 is not a variable gain amplifier).

Allowable Subject Matter

4. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 18, 20-27 are allowed.

6. The following is an examiner's statement of reasons for allowance:

With respect to claims 18, 26, and 27 Yamamoto discloses (Fig.1)the method of processing radio frequency (RF) signals, the method comprising the steps of: receiving an input RF signal (12); mixing said input RF signal (connection between items 12 and 14) with an operating frequency signal to generate a first signal; filtering said first signal to generate a second signal (connection between items 16 and 17), wherein said filtering said first signal includes processing said first signal through a filter 15; amplifying to a fixed level with amplifier 16 said second signal to generate a third signal, wherein said amplifying said second signal to generate a third signal includes amplifying said second signal by a variable gain amplifier (VGA) 16; filtering said third signal to generate a fourth signal; and amplifying said fourth signal a fixed amount with amplifier19 to generate a fifth signal at the output of amplifier 19; the Yamamoto reference however does not specifically disclose wherein the first filter is a low pass filter and wherein said mixing, filtering and amplifying steps are performed on a single integrated circuit substrate.

The Kaschke reference however discloses putting the electrical components on a single integrated substrate circuit is very well-known in the art; and also, it is an obvious choice of design as evidenced by Kaschke (col. 3, lines 28-35).

Kaschke discloses a radio telephone wherein the electrical components are constructed on a single integrated substrate. Hence, it would have been obvious to one of ordinary skill in the art to have the components on a single integrated substrate in order to reduce size, weight, or components.

And the Eastmond reference discloses wherein the first filter 13 (Figs.2 – 5) are a low pass filter after a mixing stage from mixer 128 of Fig.1 is processing the Q signal after mixing. The limitation that is claimed discloses a first filter have an input connected to an output of said mixer, no where do the claims mention any direct connection.

However the prior art does not specifically disclose wherein the limit of said VGA being, the maximum level acceptable by, said third signal filtering step through filter without distortion.

Claims 20-21, 23-25 are dependent on allowable claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chan whose telephone number is (571) 272-0570. The examiner can normally be reached on Mon - Fri (9AM - 5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Chan
Art Division 2618
11/1/07

NAY MAUNG
SUPERVISORY PATENT EXAMINER